Harris Exhibit 34

Post-Merger MCI-WorldCom Performance Implied by Synergy Estimates

(Dollar Amounts in Billions for Combined Companies)

	1997 (1)	1999	2000	2001	2002
Estimates from Joint Proxy Statement					
Total Pre-Tax Operating Synergies[2]	-	$2.5	$3.6	$4.6	$5.6
Synergies as % of Combined Revenue[2]	-	6%	8%	8%	8%
Synergies as % of Combined Operating Expense[2]	-	8%	10%	11%	12%
Implied Projections[3]					
Revenue	$26.2	$41.7	$45.0	$57.5	$70.0
Operating Expenditure	$24.1	$31.3	$36.0	$41.8	$46.7
Operating Margin	$2.1	$10.4	$9.0	$15.7	$23.3
Revenue as Multiple of Annualized 1997 Revenue		1.6x	1.7x	2.2x	2.7x
Operating Margin as % of Revenue	8%	25%	20%	27%	33%

Sources:

1. 1997 full year data estimated on the basis of the pro-forma statement of operations for the nine months ended 9/97 reported in SEC Form S-4, the joint proxy statement dated January 22, 1998 registered by WorldCom Inc., page 89.
2. Synergy estimates as reported in SEC Form S-4, page 42.
3. The implied projections for 1999 through 2002 are calculated by applying to the reported pre-tax operating synergies the reported ratio of synergies to combined revenue and the reported ratio of synergies to combined operating expense.

Harris Exhibit 35

Stock Market Capitalization Shows Synergies to Be Over-Estimated

Salomon Smith Barney "Low" Valuation	**Valuation[1]**	**Shares Outstanding[2]**	**Company Valuation**
	($/Share)	**(Millions)**	**(Billions)**
MCI Stand-Alone (Low Value)	$32.7	780	$25.5
WorldCom Stand-Alone (Low Value)	$37.7	910	$34.3
Synergies[3]			$30.9
Combined Company Value			$90.7

Stock Market Capitalization	**Stock Price [4]**	**Shares Outstanding [4]**	**Market Capitalization**
	($/Share)	**(Millions)**	**(Billions)**
MCI	$46.0	780	$35.9
WorldCom	$37.9	1,013	$38.4
Combined Stock Market Value			$74.2

Summary

Combined SSB Valuation	$90.7
Stock Market Value	$74.2
Difference	$16.4
Difference as a % of Synergies	53%

Sources:

1. Per share valuation on the basis of the average of the ***low values*** at which Salomon Smith Barney (SSB) valued MCI and WorldCom, using various valuation methods specified in SEC Form S-4, the joint proxy statement dated January 22, 1998 registered by WorldCom Inc., pages 49 and 50.
2. Number of shares outstanding as reported in SEC Form S-4 pages 33 and 49.
3. Present value of revenue synergy as estimated by SSB and reported in SEC Form S-4 page 46.
4. Closing stock prices as of March 10, 1998. MCI shares outstanding as implied by SSB in SEC Form S-4 page 49. WorldCom shares outstanding as of March 10, 1998, as reported from the Chicago Board of Trade (see http://cboe.pcquote.com/cgi-bin/cboeget.exe)

APPENDIX 4

Affidavit of
Richard Schmalensee and William Taylor

BEFORE THE FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

In the Matter of Applications of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc.	)	CC Docket No. 97-211

Affidavit of
Richard Schmalensee and William Taylor
on behalf of GTE

March 13, 1998

AFFIDAVIT OF RICHARD SCHMALENSEE AND WILLIAM TAYLOR

ON BEHALF OF GTE

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I. Introduction

A. Qualifications

1. Richard Schmalensee is the Gordon Y. Billard Professor of Economics at the Massachusetts Institute of Technology (MIT), Deputy Dean of the MIT Sloan School of Management, and Director of MIT's Center for Energy and Environmental Policy Research. He also is a Special Consultant to National Economic Research Associates, Inc., a Director of the Long Island Lighting Company, a Member of the EPA's Environmental Economics Advisory Committee, and Chairman of the EPA's Clean Air Act Compliance Analysis Council. He served as a Member of President Bush's Council of Economic Advisors with primary responsibility for domestic and regulatory policy, including environmental and telecommunications policy and for U.S. assistance to Central and Eastern Europe. He served for several years as a consultant to the Bureau of Economics of the Federal Trade Commission.

2. Dr. Schmalensee has done extensive research on aspects of industrial organization and antitrust policy, particularly nonprice competition and conditions of entry. He has also studied the telecommunications industry, the electric power sector and general issues of regulation and regulatory reform. He has testified in both federal and state courts, before several Congressional committees, and before the Federal Trade Commission, and he has served as a consultant on regulatory and competitive issues to numerous organizations in the United States and abroad.

3. He received his S.B. and Ph.D. degrees in economics from MIT and taught for some years at the University of California, San Diego. At MIT, he teaches graduate courses in industrial organization, its applications to management decisions, government regulation and government/business relations. He has published over 60 articles in professional journals, including *The American Economic Review*, *The RAND Journal of Economics*, *The Harvard Law Review*, *The Journal of Econometrics*, *Public Utilities Fortnightly*, *Econometrica*, *The Journal of Law and Economics*, *The Journal of Industrial Economics*, *The Economic Journal*, *The Antitrust Law Journal*, *The International Journal of Industrial Organization*, *The Quarterly Journal of Economics*, and *The Journal of Economic Perspectives*. He is the author of *The Economics of Advertising* and *The Control of Natural Monopolies* and co-author of *Markets for Power*. He is also co-editor of the *Handbook of Industrial Organization* and founding editor of the MIT Press Regulation of Economic Activity monograph series. He has served on the editorial boards of *The American Economic Review*, *Zeitschrift fur Nationalokonomie*, *The International Journal of Industrial Organization*, *The Journal of Economic Perspectives*, *Recherches Economiques de Louvain*, and *The Journal of Industrial*

Economics. He has served on the Executive Committee of the American Economic Association and is a Fellow of the Econometric Society and the American Academy of Arts and Sciences.

4. William Taylor is a Senior Vice President of National Economic Research Associates, Inc. (NERA), head of its telecommunications economics practice and head of its Cambridge office. He received a B.A. degree in economics, *magna cum laude*, from Harvard College in 1968, a master's degree in statistics from the University of California at Berkeley in 1970, and a Ph.D. in Economics from Berkeley in 1974, specializing in industrial organization and econometrics. He has taught and published research in the areas of microeconomics, theoretical and applied econometrics, and telecommunications policy at academic institutions (including the economics departments of Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute of Technology) and at research organizations in the telecommunications industry (including Bell Laboratories and Bell Communications Research, Inc.). He has participated in telecommunications regulatory proceedings before state public service commissions, the Federal Communications Commission, the Department of Justice and the Canadian Radio-Television and Telecommunications Commission concerning competition, incentive regulation, price cap regulation, productivity, access charges, telecommunications mergers, pricing for economic efficiency, and cost allocation methods for joint supply of video, voice and data services on broadband networks.

5. Dr. Taylor's articles have appeared in numerous telecommunications industry publications as well as *Econometrica*, the American *Economic Review*, the *International Economic Review*, the *Journal of Econometrics*, Econometric *Reviews*, the *Antitrust Law Journal*, *The Review of Industrial Organization*, and *The Encyclopedia of Statistical Sciences*. He has served as a referee for these journals (and others) and the National Science Foundation, as an Associate Editor of the *Journal of Econometrics*, and as a commentator on the PBS Nightly News Hour.

B. Overview

6. The purpose of this affidavit is to evaluate the likely effects of a MCI/WorldCom merger on competition in long distance markets. Beyond the substantial increases in concentration and the likely increases in market power that would occur if the "Big Four" (AT&T, MCI, Sprint and WorldCom) become the "Bigger-Three" (AT&T, MCI/WorldCom, Sprint), the merger would materially change the incentives of the merged company compared to WorldCom's current incentives to provide capacity and services to resellers. This change is important because resellers have been a major, growing, source of competition to the current Big Three for residence and low-volume business markets. Resellers already provide price competition to the Big Three (AT&T, MCI and Sprint). Absent the merger, resellers may soon become sufficiently competitive to undermine further the current oligopolistic, price-following pattern of the Big Three in which one carrier (generally AT&T) raises rates and the others soon match the increase.

7. Thus, the merger is likely to reduce competition in all major long distance markets. More specifically, the merger is likely to harm:

- retail competition and resellers of WorldCom's services,
- residence and low-volume business consumers, and
- high-volume business customers, and competition in other markets in which MCI and WorldCom have disproportionately large shares.

The impacts would materialize as follows:

- The merger would increase concentration in markets in which WorldCom and MCI compete. Long distance markets are concentrated and would become more concentrated with HHIs rising over 680 points in the wholesale market, and about 1,100 points in the high-volume business market, based on estimated 1997 revenues. (See Section III below.)

- The merger would change how WorldCom serves residence and low-volume business customers from a predominantly non-vertically integrated wholesale provider that serves residence and low-volume business customers through resellers to an integral part of MCI's vertically integrated residence and small business operations.

- The impact of this change would be magnified because it would transform WorldCom from a "maverick" supplier to smaller retail residence and small business service providers to a firm that closely matches the current Big Three.

- Thus, in the residence and low-volume business market, in which conventional concentration measures would misleadingly suggest a smaller increase in concentration from the merger, the merger would facilitate continued oligopolistic price following because it would hinder resellers who disrupt the pricing practices of the current Big Three. These smaller firms use substantial amounts of WorldCom's wholesale services and facilities, and if WorldCom were integrated with a member of the collusive enterprise, the merged firm would be likely to raise wholesale prices or reduce wholesale services <u>on the margin</u>.

8. This change is a source of concern because the resellers, which included WorldCom in the early 1990s, have grown substantially in the last five years—roughly doubling their market share to about 26 percent of long distance revenues in 1997 from only about 11 percent in 1991.[1] Such firms have done so by offering lower prices and/or more desirable services than the Big Three. Thus, to the extent that the merger raises resellers' input costs, it will harm competition and consumers.

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[1] Excluding WorldCom, their share grew from 11.3% in 1991 to 18.8% in 1997. (See Section II below.)

II. Resellers and WorldCom have posed a growing challege to the Big Three and provided benefits to consumers.

A. Resale benefits consumers.

9. Consumers have benefited from resale in a variety of ways. As the Big Three have developed a stable oligopolistic price-following pattern for residence and low volume consumers, resellers have evidently provided lower-cost and/or more desirable services to a growing portion of the market. Resellers' growth appears to be closely associated with WorldCom's growth. Further, resale facilitates entry by new facilities-based entrants by reducing entry costs.[2] In addition, as the FCC has long recognized, resellers serve an important arbitrage function that can reduce price discrimination among end users by vertically integrated providers.[3] Finally, the ability of large resellers to disrupt oligopolistic retail pricing patterns is indicated by SNET's beneficial effects on long distance prices.

B. The role of resellers in the long distance industry

10. To understand the growing role of resellers and WorldCom, it is necessary to describe briefly the long distance industry's structure. First, there are currently only four U.S. firms with nationwide long distance networks. WorldCom itself has stated that this is the case.[4] This fact is also reflected in the wholesale sales and capacity data summarized below.

11. Second, it is important to understand how these nationwide facilities-based carriers relate to the other "facilities-based" carriers and pure resellers. In the FCC data on market shares, carriers are basically sorted into pure resellers and facilities-based carriers. The former are also referred to as "switchless" resellers and, as the name implies, they do not even own their own switches. Facilities-based providers include firms that may own (or control through long term leases), at least one switch or some fiber or microwave transport equipment. Being facilities-based does not, therefore, mean that a firm carries or switches all of its own traffic. Indeed, such firms depend in large measure on the Big Four to transport substantial parts of their traffic and/or to provide a host of other functions ranging from switching to signaling (to set up and monitor calls) to billing information. Furthermore, even WorldCom and the other members of the Big Four use each other to carry some traffic or for circuit capacity in areas where their own networks do not reach or have little capacity.

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[2] Potential facilities-based entrants must incur two different sorts of fixed costs: (i) the infrastructure costs of building a network and (ii) the marketing costs of building brand recognition. Resale permits entrants to incur these costs serially rather than simultaneously.

[3] Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services and Facilities, Report and Order, Docket No. 20097, 60 FCC 2d 263 (1976).

[4] SeeWorldCom's 1996 10-K, March 1997, at 5.

12. Third, WorldCom has offered services and pricing designed specifically for wholesale sales to resellers. In addition, resellers have historically purchased services from the Big Three's large business customer tariffs. Thus, if, as seems likely, the large increase in concentration in the high-volume business leads to higher retail prices in that market, it would increase input prices for long distance firms that resell from tariffs designed for high-volume business customers.

13. Prior to the early 1990's, Sprint and MCI posed a growing challenge to AT&T—capturing about 25 percent of long distance revenues by 1991. In that year, Sprint's share plateaued at about 10 percent—while AT&T's share fell to 63 percent and the other carriers captured the remaining 10 percent of the market. Since then, MCI's share growth peaked and the other carriers—WorldCom and resellers—collectively have overtaken MCI, with WorldCom alone garnering about 8 percent of overall long distance revenues in 1997. Exhibit 1 shows the toll revenue market shares for the Big Three interexchange carriers and all other carriers combined.[5]

14. Besides WorldCom, almost all the carriers other than the Big Three are resellers which focus on the residence and low volume business markets.[6] Thus, the smaller carriers are evidently growing while AT&T is contracting its market share. As a result, the merger would threaten (for reasons explained below) a set of firms that have offered an alternative to the coordinated pricing of the Big Three for residence and low-volume business customers.

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[5] The FCC periodically reports on interexchange carrier market shares. It measures market share using access minutes, presubscribed lines, and toll revenues. For present purposes, toll revenues are a useful summary measure. Thus, we used annual data through 1996 and estimated 1997 revenues based on 1996 annual data, and 1996 and 1997 quarterly data from: James Zolnierek and Katie Rangos, Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, "Long Distance Market Shares" (January1998), Tables 3.2 and 3.4.

[6] According to Atlantic-ACM data, resellers derive over 60 percent of their revenues from residence and "small" business customers (defined as business customers generating less than $500 in revenue per month), and about 85 percent of their revenue from customers spending $5,000 or less per month; thus, only about 15 percent of their revenues come from "large customers" (defined as spending more than $5,000 per month). *Phone +*, "Long Distance Carriers and Resellers Source Book," September 15, 1997, p. 8.

C. The residential and low-volume business consumers have seen substantial oligopolistic pricing by the vertically integrated Big Three IXCs (AT&T, MCI and Sprint).

1. The Big Three have not passed through access price reductions.

15. AT&T raised its domestic interstate residential basic rates by 24 percent from 1991 to 1998,[7] even though average access charges for the interexchange carriers fell by 29 percent in that period.[8] AT&T's costs other than access have presumably been declining as well.[9] Net of access charges, AT&T raised basic rates by 68 percent.[10] If the long-distance market were truly

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[7] In 1994, AT&T raised rates twice. The first increase was 6.3 percent in January 1994 ("AT&T Proposes $750 Million Rate Hike, New Calling Plan Aimed at High-Volume Residential Users," *Telecommunications Reports*, January 3, 1994). The second increase was 3.7 percent in December 1994 ("AT&T and Rivals Boost Rates Further," *Wall Street Journal*, November 29, 1994, p. A3). In 1995 the FCC reported, ". . . the record demonstrates that, since 1991, basic schedule rates for domestic residential service have risen approximately sixteen percent (in nominal terms), with much of the increase occurring since January 1, 1994." (Federal Communications Commission, Order, *Motion of AT&T Corp. to Be Reclassified as a Non-Dominant Carrier*, FCC 95-427, Adopted October 12, 1995, Released October 23, 1995, ¶ 83, p. 37.) Therefore, we deduce that AT&T increased rates by 1.16/(1.063*1.037)-1=0.05 from 1991 through 1993. AT&T raised basic rates by a further 4.3 percent in February 1996 ("AT&T to Raise Basic Prices an Average 40 Cents a Month," *Bloomberg News Services*, February 16, 1996. See also "AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports*, February 26, 1996, p. 27); and 5.9 percent in December 1996 ("AT&T Follows MCI, Sprint with Long Distance Rate Increases," *Telecommunications Reports*, December 2, 1996). PNR and Associates' "Bill Harvesting III," Release 2 (May 1997), provides a representative set of direct-dialed and calling-card toll calls. That fixed set of calls was priced out using the AT&T tariffs for December 1, 1996, July 2, 1997, and November 8, 1997. Based on these calculations, AT&T reduced rates by 5.8 percent on July 2, 1997, but raised them by 2.7 percent on November 8, 1997. It did not reduce per-minute basic rates in 1998 in response to the local exchange carriers' reductions in per-minute access charges. The cumulative increase from 1991 to 1998 was 1.05*1.063*1.037*1.043*1.059*(1-0.058)*1.027-1 = 0.24.

[8] From 1991 to 1998, average switched access charges fell from 6.97 cents to 4.92 cents per conversation minute. (Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, *Trends in Telephone Service* (February 1998), Table 1.2.) 4.92/6.97-1 = -0.29.

[9] In its price cap filing before the FCC, AT&T reported data showing that, from 1985 to 1991, it reduced its capital costs relative to output by 2.1 percent per year, and it reduced its non-capital costs by 7.3 percent per year. (R. Schmalensee and J. Rohlfs, "Productivity Gains Resulting from Interstate Price Caps for AT&T," report filed by AT&T in CC Docket No. 92-134, July 1992. The cost reductions we report here are in real terms.) Subsequently, AT&T reported that it continued to improve productivity: "Total cost of telecommunications services declined [in 1993 and 1994] despite higher volumes, *in part* because of reduced prices for connecting customers through local networks. *In addition, we improved our efficiency in network operations, engineering and operator services.* With lower costs and higher revenues, the gross margin percentage rose to 41.8% in 1994 from 39.0% in 1993 and 37.2% in 1992." (AT&T 1994 Annual Report, p. 24, emphasis added.) After 1994, AT&T stopped reporting such detail about its long distance operations, but there is no evidence of any reversal in the long-term trend in cost reductions after 1994.

[10] Based on our calculations, the average domestic interstate residential basic rate is currently $0.191 per minute. (We applied AT&T's November 8, 1997, tariff to the representative set of toll calls from "Bill Harvesting III,"

competitive, the incumbent interexchange carriers instead would have passed through to consumers the reductions in both access and non-access costs.

16. Some customers subscribe to discount calling plans and pay less than basic rates. It is even true that the percentage of AT&T's customers subscribing to calling plans has increased since 1991, so the average percentage discount received by residential customers as a whole has increased. But, even taking account of the increase in the average discount, the rates paid by the average residential customer have increased since 1991. The average discount off basic rates on a dollar of residential AT&T toll calls in 1996 was only about 13.9 percent.[11] We also assume that the average discount was the same in 1997 as it was in 1996.[12] To construct an extreme hypothetical illustration, suppose that *no* AT&T customer had a discount-calling plan in 1991. Under that extreme assumption, AT&T residential customers would have paid an average rate that was seven percent higher in 1997 than it was in 1991.[13] Contrary to that extreme illustration, however, according to Yankee Group national surveys, 20.5 percent of AT&T households had a calling plan in 1992,[14] and the percentage had increased to only 35.8 percent in 1997.[15] We assume that the percentage of households with a calling plan would have been roughly 18 percent in 1991. A plausible estimate of the increase in AT&T's average interstate rates, *accounting for discounts*, is about 14 percent from 1991 to 1998.[16] Yet during the period, as we mention above, AT&T's access costs declined by 29 percent, and its other costs per minute presumably declined as well.

17. The following table summarizes our findings regarding AT&T's interstate consumer toll rate changes:

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op. cit.) The average rate in 1991 should therefore have been \$0.191/1.24 = \$0.154. The change in basic rates net of access charges was then (\$0.191-\$0.0492)/(\$0.154-\$0.0697)-1 = 0.68.

[11] Based on calculations using "Bill Harvesting III," *op. cit.*

[12] Although AT&T introduced its One Rate calling plans in 1997, the percentage of its customers with calling plans declined from 38.4 percent in 1996 to 35.8 percent in 1997. (The Yankee Group, "1996 TAF Survey: Implications for Convergence" (December 1996), Table 307, p. 717; and The Yankee Group, "The Technologically Advanced Family" (October 27, 1997), Table 317, p. 477.) Thus, it is not clear that the average discount rose in 1997.

[13] 1.24*(1-0.139) = 0.068.

[14] The Yankee Group, "The Technologically Advanced Family Tracking Study—1992," Table 303.

[15] The Yankee Group, "The Technologically Advanced Family" (October 27, 1997), Table 317, p. 477.

[16] We assume that, between 1991 and 1996, the average discount is proportional to the percentage of households that have calling plans. Therefore, we estimate that the average discount in 1991 was 0.139*18/38.4=0.065, where 0.139 is the average discount in 1995, 38.4 is the percentage of AT&T households with calling plans in 1996, and 18 is the percentage of AT&T households with calling plans in 1991. Then, accounting for discounts, the increase in residential rates from 1991 to 1998 was (1+0.24)*(1-0.139)/(1-0.065)-1 = 0.142, where 0.24 is the cumulative fractional increase in AT&T's basic rates from 1991 to 1998.

Table 1
AT&T's Average Interstate Consumer Toll Rate Changes
($ per Conversation Minute)

	12/91	1/98	Change	% Change
Basic Rate	$0.154	$0.191	$0.037	24
Access Charge	$0.070	$0.049	-$0.020	-29
Basic Rate Net of Access	$0.084	$0.142	$0.057	68
Average Discount	6.5%	13.9%		
Rate with Discount	$0.144	$0.165	$0.020	14
Rate with Discount Net of Access	$0.074	$0.115	$0.041	55

*Numbers might not add because of rounding.

18. Thus, for AT&T's residential customers as a whole, AT&T raised interstate toll rates net of access charges by 55 percent from 1991 to 1998, even accounting for discounts.

19. We believe that this same trend is present in the basic rates of the other members of the Big Three. As shown below, they have raised their basic rates in lock step with AT&T.

2. The Big Three have increased their residential prices in lock step.

20. The timing of price changes among the Big Three carriers provides further evidence of tacit oligopoly price coordination rather than vigorous price competition. In the interstate toll market, the evidence shows an unmistakable pattern of price leadership that has allowed the interexchange carriers to increase their prices, revenues and margins. For instance:

- In the five months before December 1993, "AT&T . . . filed [three] large consumer services rate increases and its two major 'competitors' . . . matched them."[17]

- Similarly AT&T instituted three basic price hikes in the first nine months of 1994, and, once again "[e]ach time, MCI and Sprint followed."[18]

- In December 1994, AT&T raised its rates yet again. "MCI . . . and Sprint . . . subsequently proposed similar long-distance price increases of their own."[19]

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[17] "MCI, Sprint Match AT&T's Consumer Rate Increase Again," *Telecommunications Reports*, Vol. 59, No. 49, December 6, 1993, p. 12.

[18] James Kim, "Cover Story: Discount War Can Be Confusing," *USA Today*, September 23, 1994, p. 1B.

[19] "AT&T Seeks Further Rate Hikes," *Telecommunications Reports*, Vol. 61, No. 1, January 9, 1995, p. 15.

- On February 16, 1996, AT&T announced new tariffs for basic residence toll service that raised the "average customer's monthly bill by about 40 cents."[20] On February 20 and 21, Sprint and MCI followed.[21]

- Over the 1996 Thanksgiving weekend, AT&T announced that basic long distance prices would rise by yet another 5.9 percent, following announcements by MCI and Sprint of 4.9 and 2 percent increases in consumer long distance rates.[22]

21. A competitive market would be extremely unlikely to exhibit this price leader-follower behavior. Absent a cost increase that affected all competitors, a firm subject to effective competition would be unlikely to raise prices, because rivals would not raise prices, and customers would switch to those rivals whose rates were relatively lower. Many commentators and the FCC have noted how unlikely such leader-follower behavior would be in a competitive market:

> the record demonstrates that, since 1991, basic schedule rates for domestic residential service have risen approximately sixteen percent (in nominal terms), with much of the increase occurring since January 1, 1994. Moreover, each time AT&T has increased its basic rate, MCI and Sprint have quickly thereafter matched the increase. In addition, studies in the record, including one submitted on behalf of AT&T, suggest that, if price cap regulation is removed for Basket 1 services, basic residential rates will rise even further...
>
> ... each time that AT&T raised its basic rates, MCI and Sprint quickly matched the increase. Thus, to the extent that prices would rise if the Basket 1 price cap were removed, this is not evidence of AT&T's individual market power, but perhaps of tacit price coordination.[23]

22. Whether this behavior represents an exercise of AT&T's own market power or tacit collusion among the Big Three long distance carriers is immaterial. Prices remain higher than they would be under vigorous competition—particularly for low-volume customers—and continued vigorous expansion by WorldCom and the resellers could force prices lower

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[20] "AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports,* February 26, 1996, p. 27. AT&T has also increased business rates four times since March of 1995. One plan established a minimum basic charge of $5 for businesses paying AT&T's basic business rates. Another tariff increased the "Small Business Option" program rates.

[21] "MCI, Sprint Follow AT&T's Lead, Raise Rates," *Telecommunications Reports*, March 4, 1996, p. 36.

[22] AT&T Follows MCI, Sprint with Long Distance Rate Increases," *Telecommunications Reports*, December 2, 1996.

[23] Order, *Motion of AT&T Corp. To Be Reclassified as a Non-Dominant Carrier*, FCC 95-427, Adopted October 12, 1995, Released October 23, 1995 at ¶¶ 81 - 83; some footnote references omitted.

regardless of whether AT&T retains market power or the three largest firms are able to avoid price competition.

D. Absent the merger, WorldCom and resellers could undermine oligopolistic pricing by the Big Three.

23. Up to now, resellers have brought benefits to consumers by offering price/service combinations that have allowed them to capture a growing share of long distance markets. The evidence also suggests that, absent the merger, resellers may have gained enough of the market to begin to undermine the price discipline of the Big Three. As resellers gain in size they can reduce their average costs and offer lower prices. This would allow them to put more pressure on the Big Three. The prospect that entry and expansion of major resellers such as GTE and the BOCs would bring even more competitive pressure to the market is shown by SNET's beneficial impact on competition and prices in Connecticut.

24. Unfortunately, if the proposed WorldCom/MCI merger is consummated, the Big Three's oligopoly pricing would be more likely to continue and could actually worsen. Since WorldCom has historically been disproportionately—compared with the Big Three—focused on the provision of wholesale services to resellers, it has nurtured the efforts of resellers to expand in the residential (and small business) long distance market. Its merger with MCI would reduce these differences from the other major carriers and increase the prospects that the price-following behavior described above will be perpetuated.

1. As the Big Three have raised prices, resellers have captured an increasing share of the market and brought lower prices to consumers.

25. As explained above, new entrants have grown much more rapidly in the last several years than have the established Big Three. While AT&T went from 61 percent of IXC revenues in 1992 to about 44 percent in 1997, and while MCI only gained about 2.4 percentage points of market share and Sprint gained none, WorldCom increased from 1.4 percent to 8.5 percent of the market and others, taken together, increased from 11.5 to 18.8 percent of the market. Since WorldCom was predominantly a reseller in 1992, prior to its acquisition of WilTel, it is appropriate to consider WorldCom (or at least its retail operation) as a part of the new entrants for this purpose; thus, including WorldCom, the competitive fringe revenue share grew from 12.9 percent to 25.9 percent over the same time period. See Exhibit 1.

a) Resellers offer lower prices and added service choice.

26. Reseller share does not fully measure the importance of resale in promoting competition because resellers offer lower prices and/or options not available from the Big Three and because they can disrupt pricing patterns of the integrated firms. If the resellers were not offering lower prices and/or desirable services, then they would surely not have been able to capture 26 percent of the market from the Big Three. If not, why would people have left the

Big Three for smaller, less well-known carriers? Thus, it is likely that prices are lower than they would otherwise be and consumers/businesses have had choices they would not have had in the absence of resellers.

27. Summary price data are not published by carrier and the numerous complex pricing, promotion and calling plans make it difficult to precisely compare reseller prices with those of the Big Three. Thus, to obtain a sense of how reseller prices compare with those of the Big Three, we used 1996 PNR data (the same source used by the FCC to estimate residence market shares) to estimate average long distance revenues per minute for the Big Three and for the major resellers identified in the PNR data. Average revenue per minute is not a true measure of price and can produce misleading results when it is tracked over time or across customer categories. Nevertheless, by limiting our use of it to residence customers and by assessing the data for specific usage groups, we can make some useful inferences about the relative prices faced by residence customers. As shown in Exhibit 2, the major resellers charge less than the Big Three at various different usage levels.

2. WorldCom's success in wholesale has been associated with the growth of resellers.

28. It is impossible, without access to internal WorldCom (and reseller) data, to show exactly how much WorldCom has contributed to the substantial success of (both switchless and "facilities-based") resellers; however, FCC data suggest that the resellers' rapid growth has gone hand in hand with growth of WorldCom's wholesale operations. In contrast, as explained above, the Big Three have: (1) conceded market share to the entrants, arguably as part of their effort to increase their prices and profit margins by eschewing genuine price competition, at least for residence and low-volume business customers; and (2) sought to minimize wholesale sales to resellers.[24]

29. To illustrate how WorldCom's wholesale growth has been associated with growth of resellers, we developed estimates of WorldCom's wholesale sales over time and compared a growth index derived from those data with an index based on FCC revenue data for resellers. We estimated WorldCom wholesale revenues based on 1988 to 1994 FCC data on WilTel[25] and on available market research data on WorldCom's more recent (1995-1997) wholesale revenues. These data show that WorldCom's wholesale revenues (like the revenues of the resellers) have grown substantially since 1984, while the Big Three's revenues have languished. See Exhibit 3.

[24] In the Matter of AT&T Communications Apparent Liability for Forfeiture and Order to Show Cause, Notice of Apparent Liability for Forfeiture and Order to Show Cause, FCC Docket No. 94-359, Released January 4, 1995, at 7, the Commission found that "...AT&T has apparently sought to evade the Commission resale policy" by its "failure to provide service under Contract Tariff 383 to resellers in response to their orders, and its attempts to use the tariff process to alter material terms of the service to the detriment of resellers...."

[25] WilTel was acquired by WorldCom on January 5, 1995 and had been primarily a wholesale carrier. WilTel has since become the predominant part of WorldCom's wholesale operation.

A. SNET's entry into the long distance market in Connecticut provides evidence of the likely benefits to consumers from effective, large-scale resale competition with IXCs.

30. In this section we examine the impact of SNET's entry on competition for long distance services in Connecticut. We do so because SNET has been in the market for some time and because it is concentrated in a single state, unlike other resellers, who have their operations spread over numerous states. Growth of incumbent resellers positions them to have more substantial effects on the market price. The SNET example shows that when resellers are large and aggressive, they can have a very large effect on market price. The result of SNET's entry has been increased competition with significant price reductions and new services for consumers. Further, SNET, unlike MCI and Sprint, did not follow AT&T's lead when AT&T increased prices. The following is a chronology of the competition associated with SNET's entry into the long distance market.

- In the third quarter of 1993, IXCs were allowed to provide intrastate toll services on an access code basis,[26] and SNET established a subsidiary, SNET America, to resell interstate long distance service.[27]

- In April 1994, the Connecticut Department of Public Utility Control ("DPUC") approved a joint marketing agreement under which SNET's local company could sell SNET America's long distance services and SNET America could resell SNET's intrastate services.

    In its order [approving the joint marketing agreement], the DPUC said that "SNET America's entry into the interstate market will provide customers with a competitive response to the 'one-stop-shopping' opportunities currently enjoyed by the IXCs and resellers offering both intrastate and interstate telecom services in Connecticut."[28]

- SNET's entry into the interstate long distance market resulted in significant price reductions for interstate and intrastate long distance customers. When applied to Connecticut calling profiles, SNET's basic interstate rate plan (SNET Beyond Connecticut) produced a 12.8 percent savings over AT&T's basic rates for customers with usage levels below the mid-1995 median usage level. The savings were 10.6 percent for those above the median and 10.8 percent for all customers. Since AT&T's

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[26] SNET Corp., Form 10-Q (June 30, 1995).

[27] SNET Corp., Form 10-K (December 31, 1995).

[28] Telco Competition Report (1994).

average discount for customers receiving a discount was about 18.6 percent in 1995, even its *discount* rates were only slightly (about 9 percent) lower than SNET's basic rates.[29]

- In October 1995, SNET introduced "Simple Solutions," a new plan with 6-second billing, which reduces the effective rate compared with typical billed minutes, and which has larger volume discounts than the SNET Beyond Connecticut plan. The average rate per minute was 24 percent lower than AT&T's basic rates and 7.4 percent lower than AT&T's discount rates.

- In February 1996, AT&T raised its basic rates and, hence, the base for its discounted rates by about 4.3 percent; and, MCI and Sprint soon followed AT&T's lead. SNET did not; thus, its rates became more attractive relative to the three major IXCs' rates.

- By offering lower rates than AT&T's, and by *not* following AT&T's lead to raise basic rates, as MCI and Sprint have done, SNET won about 28 percent of presubscribed lines by the second quarter of 1996.[30] SNET's share of presubscribed lines continued to grow subsequently. Its share of Connecticut interstate toll revenues appears to have peaked at about 11 percent by the third quarter of 1996.[31]

- Much of SNET's gains came at the expense of AT&T. According to a March 1996 article:

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[29] This calculation is based on the 1995 PNR Bill Harvesting II data base. Since we estimate that AT&T's basic rate would have averaged about $0.166 per minute for the calling patterns of Connecticut consumers, and since the average discount received by AT&T customers on calling plans was about 18.6 percent, we estimate that AT&T's discounted rate was $0.135 per minute in Connecticut in 1995.

[30] This estimate is the percent of SNET access lines presubscribing to SNET as the long distance carrier. SNET had 597,251 presubscribed long distance lines as of June 1996 (FCC, "Long Distance Market Shares: Third Quarter, 1996," Table 4.) out of an estimated total number of access lines of 2,109,000. (SNET, SEC Form 10-Q, Quarterly Report, quarter ending June 30, 1996.) SNET operates only in Connecticut. (According to its 1995 Annual Report: substantially all of the Corporation's operations and customer base are located in Connecticut.)

[31] This estimate is based on SNET's reported interstate toll revenues from its quarterly reports to the SEC from the second quarter of 1996 to first quarter of 1997, divided by total quarterly interstate revenue for Connecticut. We estimated quarterly revenue from annual data from the FCC TRS Fund Worksheets from 1992-1995. We previously reported trade press estimates ranging from 15 percent ("SNET already has grabbed 15 percent of the long-distance market in the state from AT&T and others...." John J. Keller "Telecommunications: AT&T Discounts Signal a National Price War," *Wall Street Journal*, May 30, 1996, p. B1.) to 20 percent of revenues (Susan Jackson, "A Telecom Yankee Defends Its Turf," *Business Week*, October 28, 1996). The 20 percent estimate was evidently based on an underestimate of total interstate toll revenues: the article reported estimated Connecticut total interstate toll revenues of only $550 million. This is substantially below the $1 billion figure reported in the FCC TRS fund data.

> Nobody at AT&T paid much attention to SNET when it first started selling long-distance service in Connecticut. ... Says an AT&T marketing executive ..: "Connecticut is maybe 1% of our business. Not a big deal. Then somebody decided to check the numbers. We were amazed that SNET had taken 12% of our Connecticut long-distance business. They were kicking our ass!"[32]

- In response, AT&T instituted a new *intra*state toll discount promotion and announced that Connecticut would be the second state in which AT&T would offer local service. On May 21, 1996, AT&T lowered its direct intrastate rate to 5 cents per minute regardless of the time of day guaranteed for a full year but only to customers subscribing to their interstate long distance services.[33] (This competitive response enabled AT&T to answer SNET's lower rates without lowering interstate prices elsewhere. Rate averaging rules prevent AT&T from lowering its interstate rates in Connecticut without also lowering rates elsewhere.)

- SNET responded to the AT&T initiative by offering a new plan—billing in-state calls in one-second increments, rather than rounding up to the next minute as AT&T does — and by moving to one-second billing for its Simple Solutions plan.[34]

- AT&T's more aggressive pricing coupled with completing the implementation of intrastate dialing parity (in November 1996), which eliminated the need for IXC customers to dial access codes, substantially slowed SNET's gains in interstate toll revenues. As noted above its revenue share peaked at about 11 percent, despite its success in capturing a substantial (about 35 percent) share of subscriber lines by the first quarter of 1997.

31. Since SNET gained a larger share of customers than revenues, its interstate customers are primarily low use customers, who have not benefited from the IXCs' strategy of increasing basic rates and offering various discount plans. SNET's prices offer relatively greater savings compared with AT&T's basic rates than they do compared with AT&T's discount plans. Thus, the principal beneficiaries of SNET's long distance entry have been customers with lower usage, who have seen the largest increase in IXC prices.

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[32] O'Reilly, *Fortune* (March 4, 1996).

[33] *Business Wire* (May, 1996).

[34] Susan Jackson, "A Telecom Yankee Defends Its Turf," *Business Week*, October 28, 1996.

III. The Proposed Merger Raises Substantial Market Structure Concerns.

32. We demonstrated above that, if the merger would weaken resellers as a competitive force, it would have a significant adverse effect on competition. In this section and the next two, we demonstrate that the merger is highly likely to have an adverse effect on resellers by reducing competition in the wholesale market. It is likely to have adverse effects in other markets as well. We begin with structural issues.

A. Under the Guidelines, the proposed merger raises serious industry structure issues.

33. Until the last two years, AT&T, MCI and Sprint have been the "Big Three" (nationwide and international) long distance providers. More recently, through a series of mergers and internal growth WorldCom has grown to the point (close in size to Sprint[35]) where it is now one of the Big Four. Its competitive impact as a separate member of this group is larger than overall FCC market share data might suggest. That is, although it has about 8 percent of total long distance revenues, it has much larger shares of (at least) two key, related markets—wholesale and large-volume business markets. In both cases, this merger would, thus, be "likely to create or enhance market power," according to Merger Guideline standards.[36]

1. The merger would result in a substantial increase in concentration in the high-volume business market.

34. The effects on high-volume business customers for which WorldCom competes with the Big Three would be more direct than on low-volume customers, which we address below. By increasing concentration in this market in which WorldCom has focused its competitive efforts and making WorldCom more like the other three vertically integrated firms, the merger would facilitate efforts by the "Bigger Three" to extend their ongoing oligopolistic pricing coordination to various business markets, e.g. high-volume customers.

35. To date high-volume business customers have enjoyed more price competition than residence and low-volume business customers for two reasons. First, the Big Three have had to compete more aggressively to serve these customers because they have had alternatives that lower-volume customers have not: they can set up their own private networks. Second, the Big Three have had to fend off inroads by WorldCom in this market. Like the wholesale market, the market for large business customers is more concentrated than the toll market in aggregate.

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[35] In the third quarter of 1997 WorldCom's toll revenues were about $1.9 billion and Sprint's were about $2.3 billion. See FCC Long Distance Market Shares, Third Quarter 1997, Table 3.4. *Op. Cit.*

[36] Justice Department and Federal Trade Commission. "Horizontal Merger Guidelines." April 2, 1992, section 1.51(c).

MCI and WorldCom have both focussed their attention on this segment of the market, and the direct effect of the merger on market concentration and prices may well be higher here than across other market segments. There are countervailing forces: large customers more readily shift among carriers in response to small price differences, and they can self-supply. However, WorldCom has about 13 percent of retail high-volume business revenues. If the merger were to be completed, the merged company would have about 55 percent of the high-volume business market and this would raise the HHI by almost 1100 points to 4,287. Exhibit 4 summarizes the effect of the merger on concentration in this market.

36. The sharp increase in concentration in this market would make it easier for the Bigger Three to raise prices than the Big Three could while WorldCom remains an independent entity. Furthermore, since some resellers purchase out of the same tariffs offered to large business customers, reduced competition in this market could translate to higher prices in residence and small business markets. This would occur because the merger would transform WorldCom from an independent, predominantly non-vertically integrated wholesale participant in residence and low-volume business markets to part of MCI's vertically integrated operation. See Section IV.

2. Wholesale markets (like markets for high-volume business customers) are highly concentrated, and the merger would significantly increase that concentration.

37. For purposes of this discussion, we refer to the wholesale market as the market in which resellers purchase long distance capacity or services from other carriers. This market is extremely concentrated and the merger would increase that concentration by an alarming amount.

a) Capacity data show that the merger is "likely to create or enhance market power."

38. An ideal measure of capacity would include facilities (circuit-route miles, POPs), infrastructure (network management systems) and addressability or reach (connections to access tandems, direct connections to end offices, access to international carriage). Unfortunately such detailed data are not publicly available. Thus, we have gathered data on two (imperfect) capacity measures—number of POPs and fiber route miles—to shed some light on the impact of the merger on facilities concentration. Even imperfect measures like fiber route miles and POPs show the effect of increased concentration.

(1) WorldCom has substantially more POPs than other facilities-based carriers.

39. Data on the number of POPs suggest that the Big Four account for about 86 percent of the POPs. WorldCom has at least 60 percent more POPs than any one of the next three largest

rivals (Qwest, IXC and Frontier). As shown in Exhibit 5, using data on POPs to estimate HHIs shows that the merger would enhance market power. This HHI would rise by about 430 points from 2387 to 2815, if the merger were completed.

(2) Fiber deployment data show that there are only four current facilities-based providers of nationwide long distance services.

40. The most recent data (as of early February 1998) show that AT&T, MCI, Sprint and WorldCom account for about 80 percent of total fiber route miles. The next largest network (Williams') is only about half as large as WorldCom's. Since Williams' route miles have only a single fiber, it may be more appropriate to say that the next largest route, that of IXC, is only about 40 percent as large as WorldCom's. Exhibit 6 shows the impact of the merger on HHIs calculated using 1998 data on fiber route miles.

41. Data on POPs and fiber route miles tend to understate concentration because the Big Four have: (1) more switching and transport equipment in place and, thus, higher capacity; (2) greater network reach and density than can be captured by a simple measure of route miles; (3) well- developed network management systems; and (4) established connections and access arrangements with the LECs that will take years for any new provider to achieve. (See Section V below.)

b) Wholesale revenue data confirm that the market for wholesale long distance service is highly concentrated and that the merger would substantially increase concentration.

42. FCC-reported company specific data do not separate wholesale from retail revenues. (Further, since all long distance carriers rely to some degree on others to carry some of their traffic, the published FCC long distance revenue data contain double counting—as smaller firms purchase wholesale services from the Big Four and, in some cases, the wholesale provider may actually purchase capacity for at least part of the call from yet another firm.) Thus, to obtain data on shares of wholesale revenues, we needed to use other data sources. Market research data from two separate sources show that the market for wholesale long distance services is highly concentrated and that the merger would increase concentration.

- A Yankee Group study found that the Big Four accounted for a combined 87 percent share of the wholesale revenues in 1995. See Exhibit 7.
- Data compiled by Frost and Sullivan indicate that the Big Four accounted for about 89 percent of wholesale revenues in 1997. See Exhibit 8.

43. As shown in Exhibits 7 and 8, the merger would increase the HHIs by from about 680 to 1,250 points, depending on which measure we use.

IV. CHANGES IN THE WHOLESALE MARKET WOULD HARM RESELLERS AND COMPETITION FOR RESIDENCE AND LOW-VOLUME BUSINESS CONSUMERS.

44. The competitive harm the merger would produce is more important than would be suggested by the increased concentration in the wholesale market. WorldCom plays the role of a maverick in this industry, a firm that has different incentives from those of the industry leaders and that has the ability to disrupt anticompetitive patterns of conduct.

45. WorldCom has a disproportionate share of the wholesale market upon which resellers depend for serving residence and low-volume business customers. Further, WorldCom's incentives to serve that market are fundamentally different from those of the Big Three because AT&T, MCI and Sprint have vastly more well-developed retail operations in these markets. While the Big Three invested in setting up these operations and in developing their brand names through billions of dollars in marketing expenses, WorldCom chose to focus on the wholesale market on which smaller resellers depend for inputs to serve residence and low-volume business customers. WorldCom's growth has gone hand in hand with these entrants, while the Big Three have chosen to keep their rates higher and concede market share to them. The merger would reduce WorldCom's incentive to continue operating as a maverick source of wholesale long distance service and would thus lead to higher wholesale prices and less effective competition from the resellers. This reduced competition is important because the resellers have offered lower prices and alternative services to the benefit of consumers. Furthermore, as shown by SNET's impact on long distance competition in Connecticut, as resellers grow in size and market presence (in particular, as major firms such as SNET, GTE and eventually the BOCs enter the long distance market via resale), they can exert sufficient pricing pressure to undermine the oligopolistic pricing discipline that the Big Three have exhibited. Therefore, the merger would harm competition for a major input to these increasingly important competitors and, thus, reduce the benefits to consumers.

A. WorldCom's strategic focus on the wholesale market differs from the Big Three's approach; thus, WorldCom has a disproportionate influence on the wholesale market.

1. Until now, unlike the Big Three, WorldCom has treated wholesale as an important means of serving consumers.

a) WorldCom's stated strategy differs from the demonstrated strategies of the Big Three.

46. WorldCom's stated strategy has been to focus on the wholesale market and commercial customers.

> A predominant share of the Company's total revenues is derived from commercial customers. Commercial customers typically use higher volumes of telecommunications services than residential customers and concentrate usage on weekdays during business hours when rates are highest. Consequently, commercial customers, on average, generate higher revenues per account than residential customers do. The Company has become a significant participant in the long distance wholesale market and intends to pursue opportunities, if any, for continued expansion in this area. While total revenues in the wholesale market are less than from commercial customers, expenses in servicing customers are generally lower for wholesale operations as the result of fewer invoices, automated interfaces, more knowledgeable customers, fewer customer service personnel, and a smaller sales force.[37]

WorldCom's 1996 Annual Report reflects the continuation of this strategy:

> ...several agreements were signed which named WorldCom as primary provider of data communications and related services to major businesses. WorldCom also signed two of the largest wholesale carrier contracts in the company's history. We remain fully committed to our wholesale services customer base – and to expanding related offerings to enable our wholesale customers to remain competitive.[38]

47. WorldCom's 3rd Quarter 1997 Results quote Bernard Ebbers as saying that "[o]ur industry-leading growth in domestic switched revenues is due in part to continued success in wholesale, competitive pricing on long distance and, increasingly, a 'one stop shopping' solution for our predominately business customers." That report also states that:

> Domestic switched services revenue increased 20 percent over the third quarter 1996. This increase was primarily due to strong volume gains in both the retail and wholesale segments. WorldCom's gap between revenue and volume growth continues to be driven by strong wholesale revenues, international settlement reduction pass through, third quarter 1997 access charge pass throughs, and product mix.[39]

48. In contrast to WorldCom, "MCI markets domestic and international long-distance telecommunication, domestic data telecommunication and electronic messaging services to business, government and residential customers primarily through the sales organization of its

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[37] WorldCom's Form 10-K, December 31, 1996, filed March 1997; emphasis added.

[38] WorldCom's 1996 Annual Report, p. 3; emphasis added.

[39] WorldCom press release, "WorldCom Releases Third Quarter 1997 Results, October 30, 1997 on http://www.wcom.com/press/103097.html.